

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: **Alain COLIN et al.** Application No.: 10/588,807
Filing Date: August 7, 2006 Confirmation No.: 2793
Examiner: David H. BANH Attorney Docket: 6003.1075
Art Unit: 2854 Customer No.: 23280
Title: **ROTARY ELEMENT OF A PRINTING PRESS, HAVING AN
ENCODER AND SYNTHESIZER**

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Commissioner for Patents
P.O. Box 1450
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APPELLANTS' BRIEF UNDER 37 C.F.R. § 41.37

Sir:

Appellants submit this brief for the consideration of the Board of Patent Appeals and Interferences (the "Board") in support of their appeal of the Final Rejection dated January 5, 2010 in this application. The statutory fee of \$540.00 for filing an appeal brief is paid concurrently herewith.

I. REAL PARTY IN INTEREST

The real party in interest is Goss International Montataire SA, a corporation having a place of business in Montataire, France, and the assignee of the entire right, title and interest in the above-identified patent application. The invention was assigned to Goss International Montataire SA by an assignment originating from inventors Alain Colin, Emmanuel Lebeuf and Yves Caulier. The most recent conveyance was recorded on May 25, 2007 at reel 019367, frame 0637.

II. RELATED APPEALS AND INTERFERENCES

Appellants, their legal representatives and assignee are not aware of any appeal, interference or judicial proceeding that directly affects, will be directly affected by, or will have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 11 and 13 to 20 are pending. Claims 1 to 10 and 12 are canceled. Claims 11 and 13 to 20 have been finally rejected as per the Final Office Action dated January 5, 2010.

The rejection to claims 11 and 13 to 20 thus is appealed. A copy of appealed claims 11 and 13 to 20 is attached hereto as Appendix A.

IV. STATUS OF AMENDMENTS AFTER FINAL

No amendments to the claims were filed after the final rejection. A Notice of Appeal was filed electronically via EFS-Web on April 5, 2010.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 11 recites a rotary element of a printing press comprising:
an encoder (e.g. specification at paragraph [0021], e.g. 18 in Fig. 1) for generating a periodic first signal in response to rotation of the rotary element (e.g. specification at paragraph [0021], e.g. 10 in Fig. 1); and

an evaluation unit (e.g. specification at paragraph [0021], e.g. 24 in Fig. 1) linked to the encoder having:

at least one synthesizer (e.g. specification at paragraphs [0021], [0026], e.g. 60 in Fig. 3) for generating a second signal having a resolution ratio, a frequency ratio, and a phase relation to the first signal (e.g. specification at paragraphs [0021], [0026]), and

a control interface (e.g. specification at paragraphs [0026], [0027], e.g. 68 in Fig. 3) for data exchange coupled to the at least one synthesizer (e.g. specification at paragraph, [0027], e.g. 60 in Fig. 1) for setting at least one of the resolution ratio, the frequency ratio and the phase relation of the first signal to the second signal based on data input by a user and transmitted to the synthesizer (e.g. specification at paragraphs [0026], [0027], e.g. 60 in Fig. 1).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 11, 13, 16, 17 and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Zerillo, U.S. Patent Publication No. 2003/0183102. Claims 14 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zerillo in view of Eckelmeyer, U.S. Patent No. 4,271,379. Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Zerillo in view of Jackson et al., U.S. Patent No. 7,302,237 and in further view of Eckelmeyer. Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Zerillo in view of Marmin, U.S. Patent 5,242,367.

VII. ARGUMENTS

A. Rejections under 35 U.S.C. §102(b)

Claims 11, 13, 16, 17 and 20: Argued as a Group

Claims 11, 13, 16, 17 and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Zerillo, U.S. Patent Publication No. 2003/0183102.

Zerillo discloses a magnetic retention system including one or more elongated retention devices 50 for retaining a printing plate 55 wrapped around the outer surface of a plate cylinder 60. The plate cylinder rotates about longitudinal axis A-A in the direction of the arrow A by a cylinder motor 65 under the control of a programmable controller 67 having a user input device 67a for entering instructions therein. The controller 67 may receive signals from a shaft encoder 69 coupled to plate cylinder 60 opposite the cylinder motor 65 which enables the controller 67 to monitor and set at selected positions the angular position of plate cylinder 60 about its axis of rotation A-A. (See paragraph [0040]).

Claim 11 recites “[a] rotary element of a printing press comprising:

an encoder for generating a periodic first signal in response to rotation of the rotary element; and

an evaluation unit linked to the encoder having:

at least one synthesizer for generating a second signal having a resolution ratio, a frequency ratio, and a phase relation to the first signal, and

a control interface for data exchange coupled to the at least one synthesizer for setting at least one of the resolution ratio, the frequency ratio and the phase relation of the first signal to the second signal based on data input by a user and transmitted to the synthesizer.”

Zerillo simply does not teach or disclose generating any “second signal having a resolution ratio, a frequency ratio and a phase relation to the first signal” as claimed. Zerillo, as admitted in the Final Office Action, discloses a signal which is representative of the angular position of the shaft. A user may be able to alter this angular position via controller 67 (see [0040] of Zerillo), but this setting simply alters the angular position of plate cylinder 60 in Zerillo. Thus the phase can change, but there is absolutely no teaching of a signal with a

resolution ratio. For this, the angular pulses per revolution can be set, for example as described in [0022] of the present specification describing a high resolution at 4096 pulses per revolution. Where is a signal with such a resolution ratio in Zerillo?

Moreover, Zerillo also does not teach a signal with a frequency ratio. The frequency ratio is for example described at [0023] where a master encoder may rotate twice while the virtual encoder only once, or at double a frequency.

In addition, the Final Office Action appears to be using the exact signal having a “phase relation” to the first signal to also meet the limitation of a frequency ratio. But if in Zerillo, the user sends a control signal to set a phase of, for example, 32 degrees for when the position of the encoder is at 30 degrees (which is all that Zerillo teaches), this does not provide any information for the frequency of the control signal with respect to the encoder signal.

In other words, the phase signal in Zerillo does not contain either a resolution ratio or a frequency ratio with respect to the first signal.

Reversal of the rejections to claims 11, 13, 16, 17 and 20 under 35 U.S.C. §102(b) is respectfully requested.

B. Rejections under 35 U.S.C. §103(a): ARGUED SEPARATELY

Claim 14: Argued Separately

Claims 14 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zerillo in view of Eckelmeyer, U.S. Patent No. 4,271,379.

Zerillo is discussed above. Eckelmeyer discloses encoders 52, 54 associated with respective first and second motors 25, 50 to produce pulse trains which are compared for motor speed relationship. (Fig. 1, col. 3, lines 35 *et seq.*). If the relationship is not correct, the energization of the second motor is varied to correct the error. (*Id.*).

Claim 14 recites the rotary element as recited in claim 11 wherein a resolution of the second signal is smaller than a resolution of the first signal.

Since Zerillo is sending out a signal to change phase for a single encoder, there is simply is no reason or motivation in the prior art to provide a second signal smaller than a first signal or modify the resolution. In fact, there is no clear resolution value in any signal of Zerillo at all.

Reversal of the rejection to claim 14 under 35 U.S.C. §103(a) is respectfully requested.

Claim 15: Argued Separately

Moreover, claim 15 recites the rotary element as recited in claim 11 wherein the evaluation unit includes at least one divider device connected upstream of the synthesizer for reducing a resolution of the first signal in a decoded state.

The Final Office Action ignores the language “connected upstream of the synthesizer” and neither Zerillo nor Eckelmeyer teach this feature.

Reversal of the rejection to claim 15 under 35 U.S.C. §103(a) is respectfully requested.

Claim 18: Argued Separately

Claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Zerillo in view of Jackson et al., U.S. Patent No. 7,302,237 and in further view of Eckelmeyer.

Zerillo is discussed above. Jackson et al. discloses a wideband frequency synthesizer 100 that includes two signal generators 20a, b. (Fig. 1). Eckelmeyer is discussed above.

Claim 18 recites the rotary element as recited in claim 11 wherein the evaluation unit includes a further synthesizer for generating a further signal, the further signal having a further resolution ratio, a further frequency ratio, and a further phase relation to the first signal, at least one of the further resolution ratio or the further frequency ratio or the further phase relation of the further signal being different from the resolution ratio, frequency ratio or phase relation, respectively, of the second signal.

The purported motivation “to produce an optimized synthesized signal that could be used to control a rotary element” is simply not found in the prior art and appears to be little more than hindsight. Zerillo has no need for such a synthesized signal since it appears to just want to reset a phase without more. Moreover, Jackson appears to teach away from needing or wanting a resolution ratio.

In view of the arguments above, reversal of the rejection to claim 18 under 35 U.S.C. §103(a) is respectfully requested.

Claim 19: Argued Separately

Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Zerillo in view of Marmin, U.S. Patent 5,242,367.

Zerillo is discussed above. Marmin discloses a folder for a rotary offset printing press comprising a transfer cylinder 6, a first-fold cylinder 12 and a second fold cylinder 16. (Fig. 7).

Claim 19 recites a folding apparatus of a rotary offset press comprising at least one rotary element as recited in claim 11. It is respectfully submitted that Zerillo is for precise control of plate retention system, and that one of skill in the art would not have been motivated to modify Zerillo to provide a folder. The Final Office Action appears to be arguing modifying Marmin in view of Zerillo, but this also, it is respectfully submitted, would not have been obvious as Marmin appears to function properly without any control system of Zerillo.

In view of the arguments above, reversal of the rejection to claim 19 under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

It is respectfully submitted that the application is in condition for allowance. Favorable consideration of this appeal brief is respectfully requested.

Respectfully submitted,
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APPENDIX A

CLAIMS 11, 13, 16, 17 and 20 of
U.S. APPLICATION NO. 10/588,807

Claim 11 (previously presented): A rotary element of a printing press comprising:

an encoder for generating a periodic first signal in response to rotation of the rotary element; and

an evaluation unit linked to the encoder having:

at least one synthesizer for generating a second signal having a resolution ratio, a frequency ratio, and a phase relation to the first signal, and

a control interface for data exchange coupled to the at least one synthesizer for setting at least one of the resolution ratio, the frequency ratio and the phase relation of the first signal to the second signal based on data input by a user and transmitted to the synthesizer.

Claim 12 (canceled).

Claim 13 (previously presented): The rotary element as recited in claim 11 wherein the evaluation unit includes at least one output interface, the output interface outputting the second signal for driving a clock-pulse-controlled device.

Claim 14 (previously presented): The rotary element as recited in claim 11 wherein a resolution of the second signal is smaller than a resolution of the first signal.

Claim 15 (previously presented): The rotary element as recited in claim 11 wherein the evaluation unit includes at least one divider device connected upstream of the synthesizer for reducing a resolution of the first signal in a decoded state.

Claim 16 (previously presented): The rotary element as recited in claim 11 wherein the first and the second signals each are a sequence of signal pulses, a sequence of digital values, or a variable analog value.

Claim 17 (previously presented): The rotary element as recited in claim 11 wherein the rotary element is a shaft, a cylinder, a roller, a reel, a cylinder journal, or a gear wheel.

Claim 18 (previously presented): The rotary element as recited in claim 11 wherein the evaluation unit includes a further synthesizer for generating a further signal, the further signal having a further resolution ratio, a further frequency ratio, and a further phase relation to the first signal, at least one of the further resolution ratio or the further frequency ratio or the further phase relation of the further signal being different from the resolution ratio, frequency ratio or phase relation, respectively, of the second signal.

Claim 19 (previously presented): A folding apparatus of a rotary offset press comprising at least one rotary element as recited in claim 11.

Claim 20 (previously presented): An offset press comprising at least one rotary element as recited in claim 11.

APPENDIX B

Evidence Appendix under 37 C.F.R. §41.37(c)(ix):

No evidence pursuant to 37 C.F.R. §§1.130, 1.131 or 1.132 and relied upon in the appeal has been submitted by appellants or entered by the examiner.

APPENDIX C*

Related proceedings appendix under 37 C.F.R. §41.37 (c) (x):

As stated in "2. RELATED APPEALS AND INTERFERENCES" of this appeal brief, appellants, their legal representatives, and assignee are not aware of any appeal or interference that directly affects, will be directly affected by, or will have a bearing on the Board's decision in this appeal.